HEALTH AFFAIRS

Military Health System
Information Management/Information Technology
Benefits Management Program

Guidebook

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Preface

Executive Military Healthcare System decision-makers need valid, accurate, and quantifiable acquisition performance and mission results information to effectively manage and provide oversight of Military Health System (MHS) Information Technology (IT) investments.

(1) Performance-based/acquisition performance. The MHS Program Executive Officer and the Technical Program Managers provide the MHS Chief Information Officer (CIO) with performance-based (acquisition) information concerning cost, schedule, and technical performance of IT investments.

(2) Results-based/mission performance. Monitoring and reporting of results-based performance (mission-results) are the responsibilities of the MHS Information Management (IM) community. The Director of Information Requirements Management is accountable to the MHS CIO for defining IT investment benefits (financial and nonfinancial returns of IT projects), linking these benefits to the MHS Strategic goals and objectives, establishing performance targets, and measuring progress toward the same.

The MHS IM Benefits Management Program (BMP) provides MHS functional community managers with a four-step process to quantify and measure the contribution that IT investments make to accomplish the healthcare mission. The BMP defines how benefits are determined, evaluated, documented, and integrated into the executive-level decision and review process. IM/IT benefits are calculations of operational impact (quantified in terms of MHS cost of care, access to care, quality of care, and medical readiness benefits) that result in improving IM/IT capabilities supporting business process reengineering within the MHS. The BMP provides a complete feedback loop to ensure that the MHS strategic goals are being met by the IT investment.

This Guidebook has been designed to be used by the managers across the business areas of the MHS to implement the MHS IM/IT Benefits Management Program.

The companion documents, *MHS IM/IT Benefits Management Program Supplement (Toolkit) Parts 1, 2, and 3*, are cross-referenced within this Guidebook to direct the reader to detailed explanations, examples, summaries of policy documents, a glossary, and a summary of the status of evaluation models of the Functional Areas of the MHS. The following legend is used to cross-reference to the *MHS IM/IT Benefits Management Program Supplement (Toolkit) Parts 1, 2, and 3.*

Part X
Section X

Identifies the appropriate section in the *MHS IM/IT Benefits Management Program Supplement (Toolkit) Parts 1, 2, and 3* to turn for more detailed information and other useful resources

Identifies innovative ideas supported by the MHS IM/IT Benefits Management Program

The MHS IM/IT Benefits Management Program is designed to support the entire life cycle of an IM/IT project. Therefore, the Program identifies four major life-cycle steps. First, a performance framework is created for the initiative or program. Then, the benefits of the initiative are assessed and estimated. Once this is completed, actual benefits are compared against the estimates. Finally, a feedback loop is created whereby the outcomes of the benefits are managed.

The MHS IM/IT Benefits Management Program does not introduce new requirements on MHS managers. It is designed to help managers meet existing documentation and reporting requirements and increase the realized value of MHS IM/IT.

The Guidebook contains five sections that list the "how-to" steps required to manage IM/IT Benefits throughout a program life cycle. The references to the *MHS IM/IT Benefits Management Program Supplement (Toolkit)* are made to direct the Guidebook reader to more detailed information or additional resources designed to help an MHS manager meet the requirements of this Program.

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1. UNDERSTANDING THE MILITARY HEALTH SYSTEM (MHS) INFORMATION MANAGEMENT/INFORMATION TECHNOLOGY (IM/IT) BENEFITS MANAGEMENT PROGRAM

1.1 Policy

MHS IM/IT benefits shall be evaluated, documented, and maintained within existing decision and review processes, using a benefits life-cycle management approach; estimates will be data-driven; standards will be used; and, oversight processes will be appropriately instituted and carried out during the program life cycle.

The MHS IM/IT Benefits Management Program is a four-step process that uses benefits forecasts and retrospective evaluations to manage the returns of IM/IT projects. The anticipated benefits of the MHS IM/IT Benefits Management Program include the following:

- Increased standardization of IM/IT Benefits calculations
- Decreased IM/IT management cycle time by improving the quality of decision information; and,
- Increased accountability of IM/IT funding.

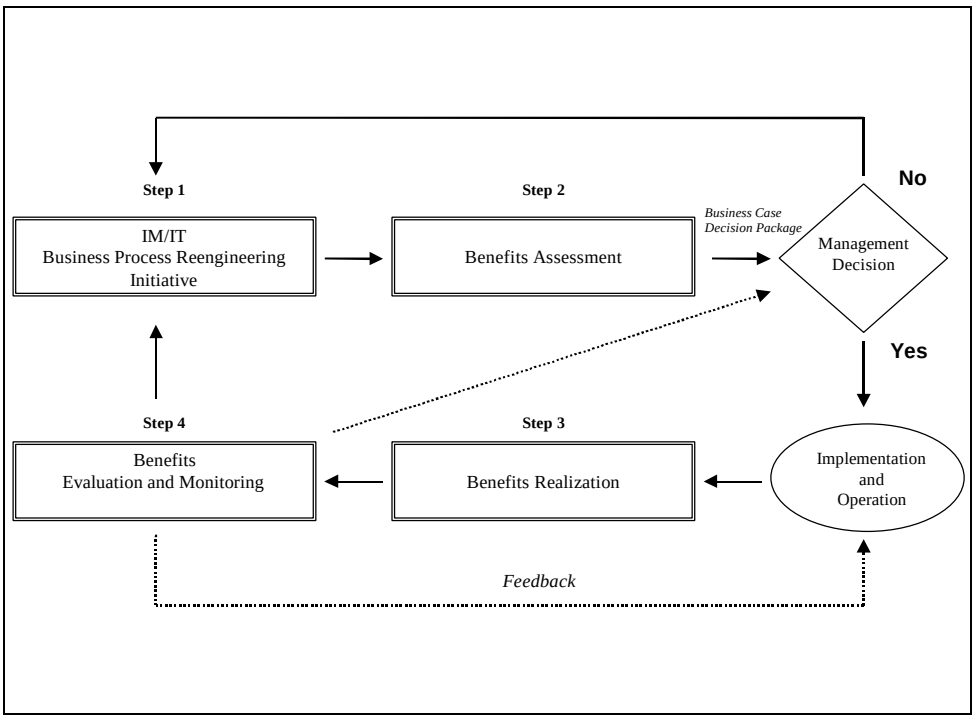


Figure 1.1
MHS IM/IT Benefits Management Program

The MHS IM/IT Benefits Management Program (Figure 1.1) within the MHS starts with a Business Process Reengineering (BPR) initiative that defines, creates, and measures a framework for functional performance. The BPR project then documents an overall business case and benefits in one of two existing business case decision packages—an Economic Analysis/Analysis of Alternatives (EA/AoA) or an Integration Decision Package (IDP). Information Management, Technology and Reengineering (IMT&R) is reviewing the use of these documents and processes and will recommend applicability criteria. The second step, benefits assessment, then quantifies the expected benefits of an IM/IT proposal as part of the preparation of a business case decision package. A management decision is then made by the senior leadership of the MHS based on the evaluation of the soundness of the business case. A negative decision returns the IM/IT functional proponent to the initial step of identifying potential BPR alternatives. A positive management decision leads to the implementation and operations phase of the life cycle. Benefits realization activities begin at this step in the life cycle. Benefits realization is the process of monitoring the implementation of an initiative both to validate the expected benefits being obtained in practice and to identify any unexpected consequences of the implementation. The benefits evaluation and monitoring step is the process of evaluating the benefits realization outcomes, making decisions whether to continue funding, and developing remedial activities and policies to support the achievement of positive outcomes in practice.

1.2 Goals

This document establishes procedures for implementation of the MHS IM/IT Benefits Management Program. This program guides operational managers in assessing the value and validity of their IM/IT business decisions in support of the strategic goals and new business directions of the MHS. The current strategic objectives, the four pillars, of the MHS are to reengineer medical readiness, deploy TRICARE, prevent illness (Healthy Communities), and rightsize the MHS footprint. These objectives then lead toward the overarching MHS goal of Customer First/Customer Focus.

1.3 Implementation

Three main program tenets must be met to implement the MHS IM/IT Benefits Management Program. The requirements are (1) benefits estimates must be data driven; (2) standards must be used; and (3) oversight processes must be appropriately instituted and carried out.

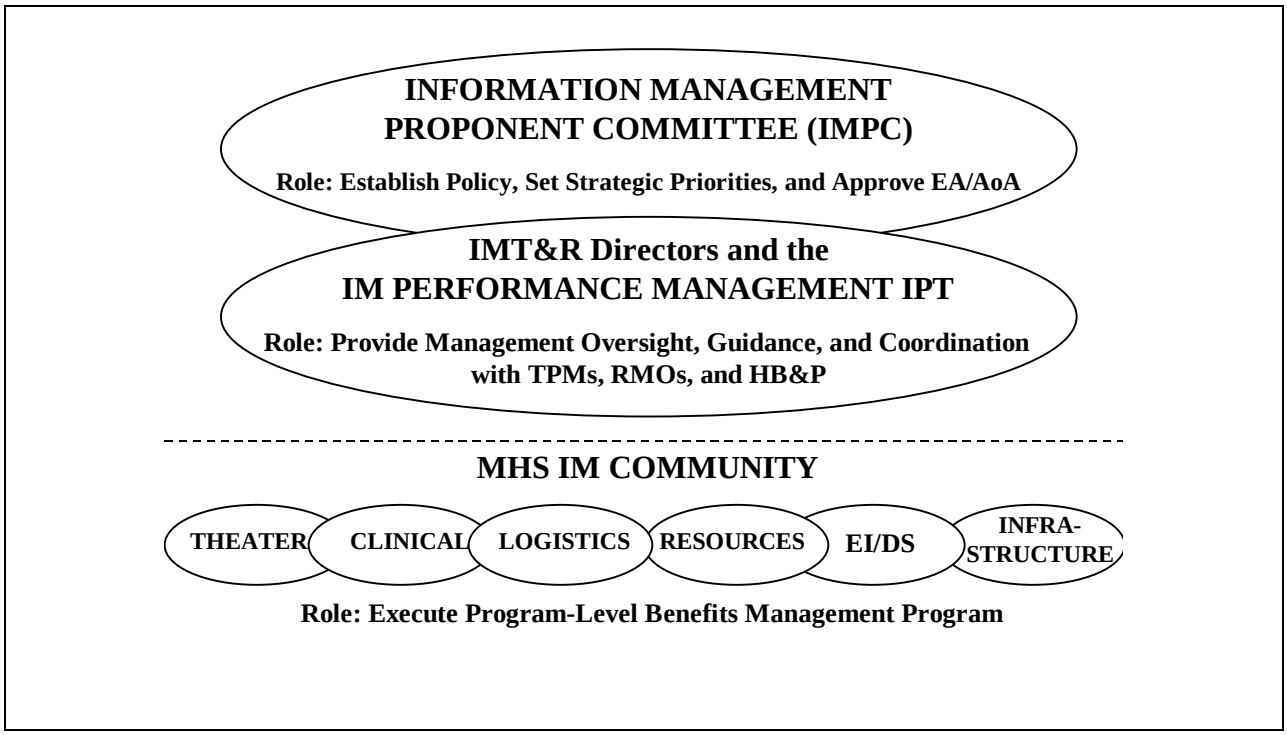


Figure 1.3
Roles and Responsibilities of the MHS IM/IT Benefits Management Program

The MHS IM/IT Benefits Management Program shall apply across the MHS and shall be coordinated and implemented by the Director of IM; Technical Program Managers (TPMs); Functional Managers (FMs); the Surgeons General; the Principal Deputy Assistant Secretary of Defense (PDASD) and staff; Resource Management Office (RMO); Health, Budget & Planning (HB&P); and the Office of the Assistant Secretary of Defense (Health Affairs) OASD(HA) IMT&R (see Figure 1.3).

At the strategic policymaking level of the MHS, senior leadership will use benefits estimates as input to the decision-making process. In this context, MHS senior leadership includes the MHS Executive Committee, the TRICARE Executive Committee, the IM Proponent Committee, and the Functional Steering Committee (FSC).

IMT&R shall provide management oversight to the MHS IM/IT Benefits Management Program to include a corporate-level assessment. Based on this assessment, feedback will be provided to the FMs and TPMs and recommendations prepared for the MHS senior leadership.

IMT&R shall work closely with the participants in this process to incorporate benefits management practices and standards into daily operations. IMT&R shall also make continuous improvements to the Benefits Management Program and updates to the *MHS IM/IT Benefits Management Program Guidebook* and *MHS IM/IT Benefits Management Supplement (Toolkit)*, as necessary, to reflect approved and implemented improvements.

Operational-level execution activities include using the *MHS IM/IT Benefits Management Guidebook* and *MHS IM/IT Benefits Management Program Supplement (Toolkit)* to prepare and update benefits in concert with the existing requirements. Key participants to operationalize the MHS IM/IT Benefits Management Program are Director, Information Management, Chief Information Officers, the Service Surgeons General, Functional Proponent Work Groups, TPMs, and FMs.

1.4 Frequently Asked Questions

1.4.1 What is the purpose of benefits management activities?

The MHS IM/IT Benefits Management Program establishes benefits management as an integral part of the standardization of IM/IT business within the MHS. In our current business environment, a need exists to continuously assess and reassess the appropriateness of both our IM/IT investments and IM/IT continued funding. This program will provide managers with guidance materials and management tools to enable them to prepare standard, comparable, and consistent Return on Investment (ROI) analyses.

1.4.2 Who is responsible for developing IM/IT benefits estimates in the MHS?

Business area FMs are responsible for the business case analysis, including the benefits estimates of their respective Functional Areas of the MHS (see Figure 1.3).

Toolkit 1
Section 5

1.4.3 Are there standard models for calculating IM/IT benefits in the MHS?

The goal is that standard models will be developed by the TPM, FM, and the Functional Proponent Working Group for each business area, utilizing the *MHS IM/IT Benefits Management Program Guidebook* as a guidance document.

1.4.4 Under what authority are economic analysis and benefits management evaluations done?

According to the Automated Information System (AIS) Economic Analysis Guide, Office of the Director (OD), Program Analysis and Evaluation (PA&E), May 1995, the following rules and regulations govern the AIS evaluation process:

- Department of Defense (DoD) Directive 5000.1 and DoD Regulation 5000.2 (and changes)—Acquisition program policy requires periodic documentation of ROI.

- Office of Management and Budget (OMB) Circular A-94 Revised—Requires economic validation of acquisition programs.

- DoD Directive 8000.1—Assigns responsibilities for improving efficiency and reducing the costs.

Toolkit 2
Section 1

1.4.5 What is AIS Economic Analysis?

AIS Economic Analysis includes any and all quantitative analysis employed by the Department to estimate, review, or validate AIS program costs and benefits. AIS Economic Analysis is required to determine the best executable AIS program acquisition alternative available to the Government. The best alternative meets critical mission requirements at the lowest life cycle cost, expressed in present value, and/or is the alternative that provides the most advantageous benefits. The AIS Economic Analysis should be reviewed and determined to be reasonable at each acquisition oversight milestone review, or at any program in-process review beyond the last official oversight review.

1.4.6 What are IM/IT benefits?

This policy defines IM/IT benefits as the benefits calculation of operational impacts, quantified in terms of MHS costs, quality of care, access to care, and medical readiness benefits,[1] that result from improving IM/IT capabilities through implementing business process reengineering within the MHS.

The MHS IM/IT Benefits Management Program defines IM/IT benefits as a function of four major performance measures: cost benefits, quality benefits, access benefits, and medical readiness benefits. This means that IM/IT investment decisions are based upon cost-benefit results and not cost-effective results.[2] In this environment, TPMs, FMs, and System Project Managers will measure and account for any dollar-valued benefits in a consistent manner and will present any quantified benefits that are not readily dollar-valued as accompanying decision information. *The intention is to develop a management decision environment where true financial benefits measures are supplemented by benefits measures of quality, access, and medical readiness.*

[1] Cost, quality, and access are three evaluation elements for any health care delivery system, while medical readiness is a unique functional requirement of the MHS medical mission that pervades all management decisions and program elements.

[2] See Weinstein, Milton and William Stason. Foundations of cost-effectiveness analysis for health and medical practices. *New England Journal of Medicine*. 1977; 296:716-21. "Cost-effectiveness analysis and cost-benefit analysis are two related, but quite different, approaches to the assessment of health practices...The key distinction is that a cost-benefit analysis must value all outcomes in economic terms, including lives or years of life and morbidity, whereas a cost-effectiveness analysis serves to place priorities on alternative expenditures without requiring that the dollar value of life and health be assessed."

1.4.7 What is the role of the MHS IM/IT Benefits Management Program?

MHS IM/IT benefits are currently documented through four reporting channels depending on the type of IM/IT initiative. Currently, benefits are reported in the following documents:

- EA/AoA as part of an investment decision package in support of business process reengineering initiatives as presented to the Information Management Proponent Committee (IMPC);
- Overarching Integrated Product Team (OIPT) Economic Analysis to support acquisition In-process Reviews and Quarterly Reports;
- IDP for migration system selection; and,
- OIPT Quarterly Report.

The MHS IM/IT Benefits Management Program does not replace the need for the AIS Economic Analysis or the IDP. However, the Program does improve the quality and consistency of the information that is presented in these documents, by developing standards for measuring, accounting, and reporting benefits estimates. To summarize, the MHS IM/IT Benefits Management Program strengthens and improves IM/IT management processes by doing the following:

- Codifying existing MHS evaluation criteria,
- Establishing benefits calculation and reporting standards; and,
- Providing life-cycle management oversight of benefits realization.

1.4.8 How is the MHS IM/IT Benefits Management Program managed?

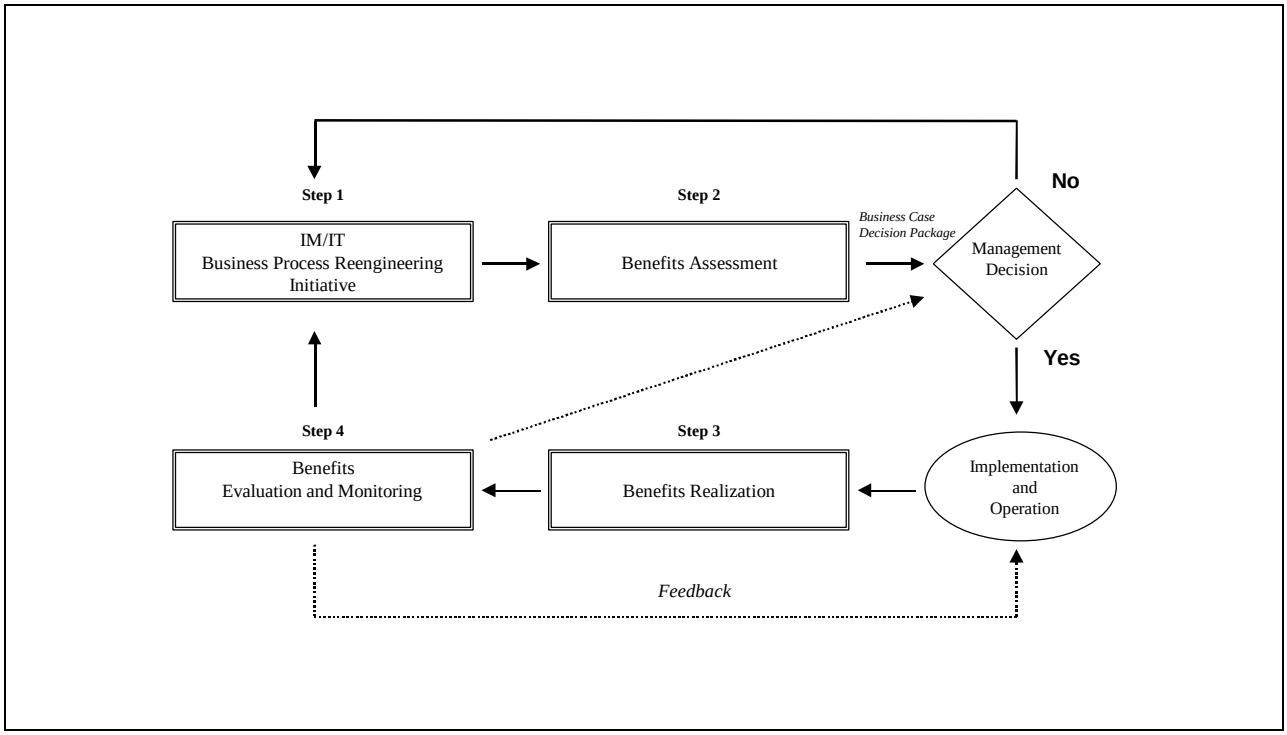


Figure 1.4.11
MHS IM/IT Benefits Management Program

MHS IM/IT Benefits Management Program, Figure 1.4.8, is composed of four activities:

1. IM/IT BPR Initiative,
2. Benefits Assessment,
3. Benefits Realization; and,
4. Benefits Evaluation & Monitoring.

The first part of managing an IM/IT BPR initiative is to create a performance framework for the initiative. This involves the following:

- Developing a business strategy;
- Identifying Critical Success Factors (CSFs) of that activity;
- Modeling the activity;
- Assigning CSF to the activities; and,
- Developing specific performance measures to assess the activity.

Benefits Assessment, the second step, is the process of quantifying the expected benefits of an IM/IT proposal and then making an appropriate management decision based on the evaluation of the benefits of the initiative.

Benefits Realization, the third step, involves monitoring the implementation of an initiative to validate that the expected benefits are actually being obtained. Benefits Evaluation and Monitoring, the fourth step, is the process of doing the following:

- Evaluating the outcomes of the benefits realization step;
- Making decisions whether to continue funding existing initiatives; and,
- Developing remedial activities and policies to support the achievement of positive outcomes.

1.4.9 What are financial benefits?

Financial benefits will be calculated using two metrics: Return On Investment (Financial ROI) Percentage and Net Present Value (NPV). Together these two metrics are powerful indicators of financial returns. Financial ROI percentage [3] is defined as the net present value of the alternative divided by the present value of the costs to implement the alternative.[4] The Net Present Value[5] is defined as the present value of total benefits of the program less the total costs of the program.[6]

In theory, the range of acceptable values for the financial ROI percentage are from zero percent to positive infinity. However, existing guidance and organizational experience suggest that there are pragmatic constraints placed on the theoretic range. The lower bound is affected by OD PA&E guidance, which states that the expected financial ROI from administrative systems must be at least 10 percent.[7] For the upper bound, projects with large ROI are placed under increased scrutiny to demonstrate their estimated returns. Management risks to the organization are high in cases where expected cost savings are high. If the returns do not materialize as expected, then the organization is left to operate with fewer resources, yet without the anticipated performance improvements.

Negative net benefit values represent projects that do not return their costs back to the organization. Therefore, implementing these projects increases organizational costs. However, when the nonfinancial returns of the proposal are believed to be greater than the project's financial cost, this alternative may still be acceptable. In this MHS IM/IT Benefits Management Program model, it is possible, and even likely, that a project which has a negative financial benefit also generates substantial benefits in the specific areas of quality and medical readiness.[8] The decision to fund such a project would then depend on how large the negative financial return is relative to the perceived returns achievable in the critical mission areas of quality and readiness, where the returns could be substantial though not measurable in meaningful dollar terms. It is in these cases

[3] See DoD Automated Information System (AIS) Economic Analysis Guide, 1 May 1995, OASD(OD PA&E). Attachment E, section E-5.
[4] Technically, the equation is: Financial ROI = [(Present value of total benefits of the Alternative Program - Present value of total costs to implement the Alternative Program) / Present value of total costs to implement the Alternative Program] X 100.
[5] A. DoD AIS Economic Analysis Guide, Section E-4.2
B. See also, Office of Management and Budget, Circular A-94 Revised, July 17, 1992, page 3, section 5a.
[6] The present value of Gross Program Benefits minus the Present Value of Program Costs.
[7] OASD PA&E DoD AIS Economic Analysis Model User's Manual 1 May 1995, page 1. See also Supplement Part 2 Section 1.1.8
[8] See numeric example, page 10.

that the use of the ROI percentage and the Net Present Value will have value to the organization, as the Net Present Value provides the total dollar value of the negative impact on the organization, while the ROI percentage provides the rate of loss to the organization. The question then becomes "Is the MHS willing to subsidize the negative financial benefits to achieve those quality and readiness benefits?" On the other hand, an implementation decision at this juncture could erroneously fund a program having only marginal mission-based benefits, based on substantially positive benefits that eventually prove to be overstated. This could lead to funding shortfalls or imbalances, and perhaps, even a broken program.

1.4.10 What are Quality, Access, and Medical Readiness Benefits?

The major performance measures of Quality, Access, and Medical Readiness will each be quantified, when appropriate, by more detailed performance measures. Each measure will have benefits calculated as the percentage change in the performance measure. The performance measures will be measured in index value form such that positive improvements would result in increases in the measure. A given business case may have multiple performance measures associated with each of the major measures of Quality, Access, and Medical Readiness.[9] It is also possible that a proposal could have only one or two detailed performance measures.[10]

The following table presents a hypothetical example of benefits management calculations for a project that stores high-quality radiographic images in digital format. In this example, radiography images are stored digitally and are retrievable instantaneously throughout the facility. As a result of this capability, radiology resources could be realigned from processes that were focused on tracking down lost films and retaking a high number of images due to technical errors in their exposure, to a productive process of high-quality patient care. In this example, there also are real savings by replacing the film and chemical processes with the digital technology.

[9] The generic equation below converts forecast performance measure index values for an alternative, as compared to the status quo baseline, into percentage performance for benefits management. A proposal could have multiple low-level performance measures within each of the major categories of Quality, Access, and Medical Readiness. The change in the index value in the alternative over the status quo is calculated in percentage form to express the benefits in each of the performance measures.

Percentage Change in Performance Measure =

*((Index value of Performance Measure in Alternative/Index value of Performance Measure in Status Quo)-1) * 100 percent.*

[10] A basic philosophy of performance measurement is not to focus on the number of metrics used but the relevance of the metrics to the fundamentals of the business being evaluated.

Table 1.4.11 Example of Benefits Management Calculations

If a project had the following mission performance impacts:	
Cost:	Quality Metric: Technical Error Rate on Radiographic Reads (expressed as the mathematical inverse 1- error rate)
Present Value (PV) Total Benefits of Alternative $140	Status Quo Value: 20% errors = (1-.2)= .8
PV Cost to implement alternative $100	Alternative Value: 5% errors = (1-.05)=.95
	Access Metric: None Medical Readiness Metric: None
Then, the benefits would be:	
Financial ROI	= (($140-$100)/$100)*100 = 40%
Net Present Value	= *$140 - $100* = $40
Quality: Error Rates on Radiographic Reads	= (.95/.8) = 1.188 = 18.8% improvement in this metric

In this example, the ROI is 40 percent, the net present value is $40, and the results-based benefits in the radiology practice will improve the rate of technical errors on radiological reads by almost 19 percent. Therefore, from a business economics point of view, this proposal would receive a *green light* for funding.[11]

1.4.11 What is a data-driven benefits estimate?

MHS initiatives shall present credible business cases through the use of data-driven benefits estimates. A data-driven benefits estimate is based on empirical data collected from published sources or from standardized observation techniques and is used throughout the IM/IT life cycle to manage the impacts of the investment on the organization. This strategy will provide consistency in the evaluation of IM/IT from the concept stage of the life cycle through to the final implementation stage. FMs, TPMs, and System Project Managers will collect operational data to measure the impact of their process improvements on the health care delivery enterprise. These data will be used to validate, refine, and recalibrate predicted benefits estimates developed as part of the original benefits assessment of an IM/IT concept proposal. FMs, TPMs, and System Project Managers will develop management plans that react to the measured effects of their process changes. Standards and processes for developing data-driven benefits estimates are provided in the *MHS IM/IT Benefits Management Program Supplement (Toolkit)* available from OASD(HA) IMT&R.

[11] From a realistic point of view, however, as stated in Section 1. the entire business case must be sound for a proposal to receive funding.

1.4.12 What are benefits standards, and how are they used?

MHS initiatives shall develop consistent benefits estimates through the use of standards. FMs, TPMs, and System Project Managers will use standards, as they are published in the *MHS IM/IT Benefits Management Program Guidebook* and the *MHS IM/IT Benefits Management Program Supplement (Toolkit)* for reporting, estimating, and evaluating benefits of IM/IT initiatives. The creation and "ownership" of the performance measures, the performance targets, and the benefits analyses are still the responsibility of the FMs, TPMs, and System Project Managers, while the creation of standards for process, reporting, and oversight is the responsibility of OASD(HA) through IMT&R, the Functional Steering Committee, and the IMPC. Reporting standards include when and how to report benefits. Estimating standards include guidance on how FMs and TPMs can identify and quantify performance measure data, use cost benefit and benefits assumptions, define benefit terms, and how to calculate benefits. Evaluating standards includes process checklists and identification of benefits dependencies within and across the four functional areas. In addition, benefits estimates will be assessed for compliance with this policy. The sources of these standards are existing DoD policy, other Federal policy, private health care industry practices, and prior DoD studies and reports.

1.4.13 What are examples of standard MHS IM/IT benefits assumptions?

The MHS IM/IT Benefits Management Program List of Standard Assumptions for Calculating Benefits is published in the *MHS IM/IT Program Supplement (Toolkit) Part 3*. These assumptions were derived from five primary sources as shown in Table 1.4.13.

Toolkit 3

Table 1.4.13 Examples of Standard Benefits Assumptions by Source

Source	Example
Congress	*Funding Levels; Force Structures; etc.*
Offices of the Secretary of Defense	*Mission, Migration Targets, Cost Analysis Evaluation & Reporting Standards; Value of Standard Full-Time Equivalents (FTEs); etc.*
Offices of the Assistant Secretary of Defense for Health Affairs	*TRICARE Implementation Schedules, Health Care Mission; MHS IM/IT Strategic Plan; etc.*
MHS IM/IT Business Areas	*Functional Requirements, Detailed Implementation Plans, Scope and Content of Business Process Reengineering Initiatives; IM/IT Benefits Models And Parameters; etc.*
Military Services	*Base Realignment and Closure (BRAC) Schedules; Number, Location and Type of Facilities; End-Strengths; etc.*

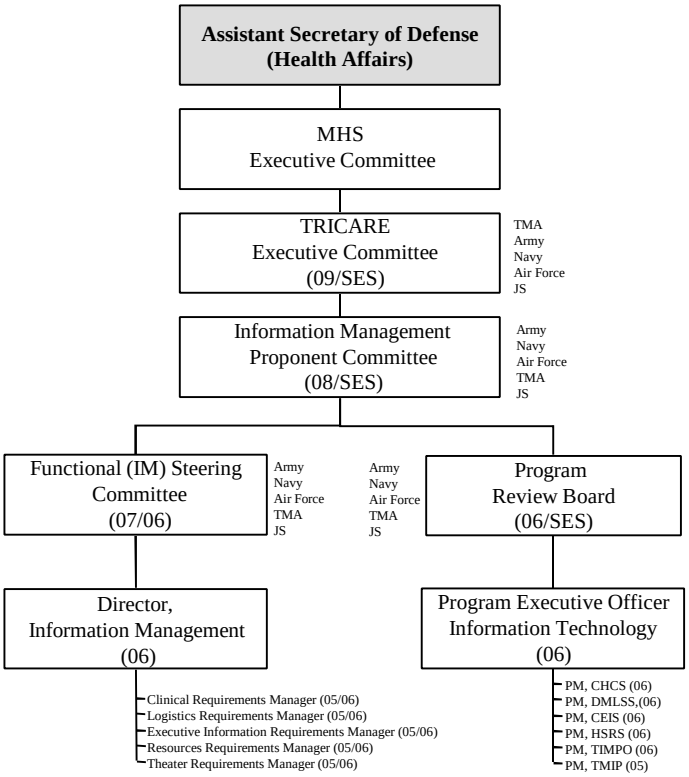
1.4.14 What is the role of the MHS IM/IT Benefits Management Program oversight?

MHS IM/IT Benefits Management Program initiative implementors shall be accountable for estimates used in the decision process through proactive oversight. The role of IM/IT Benefits Management oversight is to provide policy to create consistency in estimates; to provide evaluation of IM/IT benefits estimates as they are submitted through existing mechanisms; [12] to provide educational material to support the Program in the form of policy guidance; and to identify needed corrective management actions. The oversight role is important to the development of quality and consistency of IM/IT benefits information used within the MHS. The oversight role monitors the implementation and effectiveness of the MHS IM/IT Benefits Management Program. The management of the program relies on participation of all IM/IT Program participants throughout the MHS. Management oversight will identify unintended outcomes of programs and will develop proactive plans to deal with the outcomes. If any negative outcomes are encountered, the oversight authorities coordinate with the Program Executive Officer, FM, TPM, and functional communities to take corrective actions. In summary, the oversight strategy is to create a consistent and standard monitoring and evaluation process for IM/IT benefits throughout its life cycle to ensure that the potential benefits of IM/IT are being achieved, thus contributing to the strategic goals of the MHS.

1.4.15 What are the MHS IM/IT Benefits Management Program roles and responsibilities?

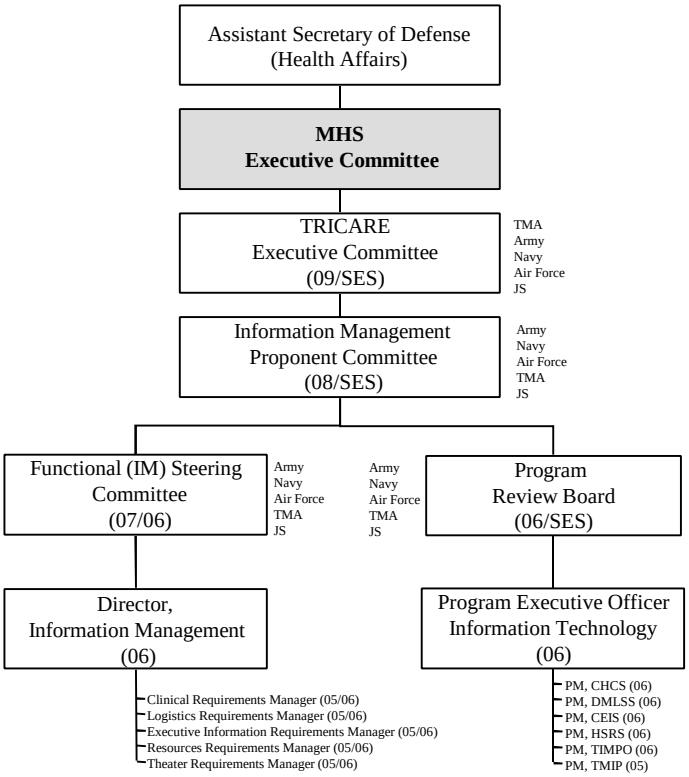
The following sections depict the roles and responsibilities of participants in the MHS IM/IT Benefits Management Program.

[12] The EA/AoA or the IDP.



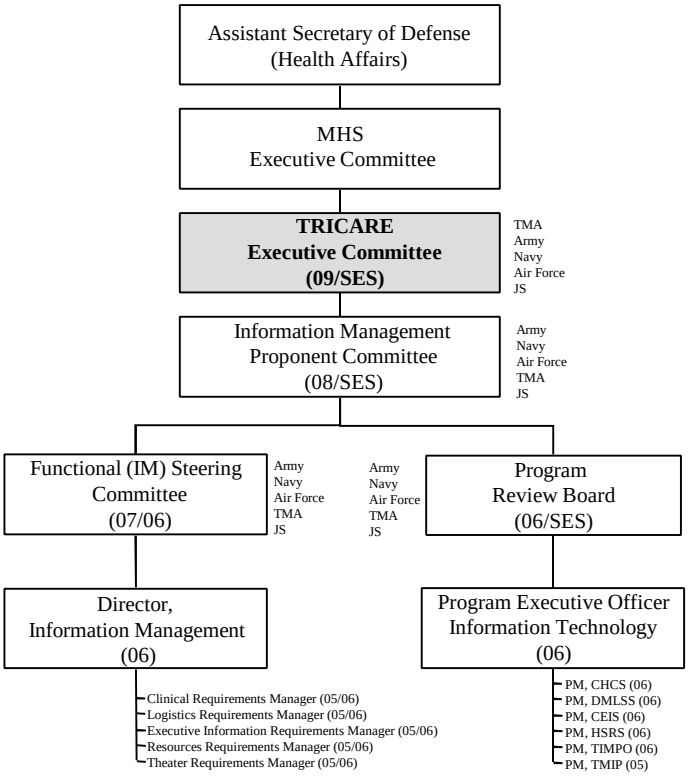
ASD (HA) roles and responsibilities are the following:

- IM/IT strategic direction;
- Program and policy oversight of MHS IM/IT and related health care activities;
- IT Investment Program Management funding review and approval;
- Milestone decision authority for non-MAIS; and,
- Component Acquisition Executive.



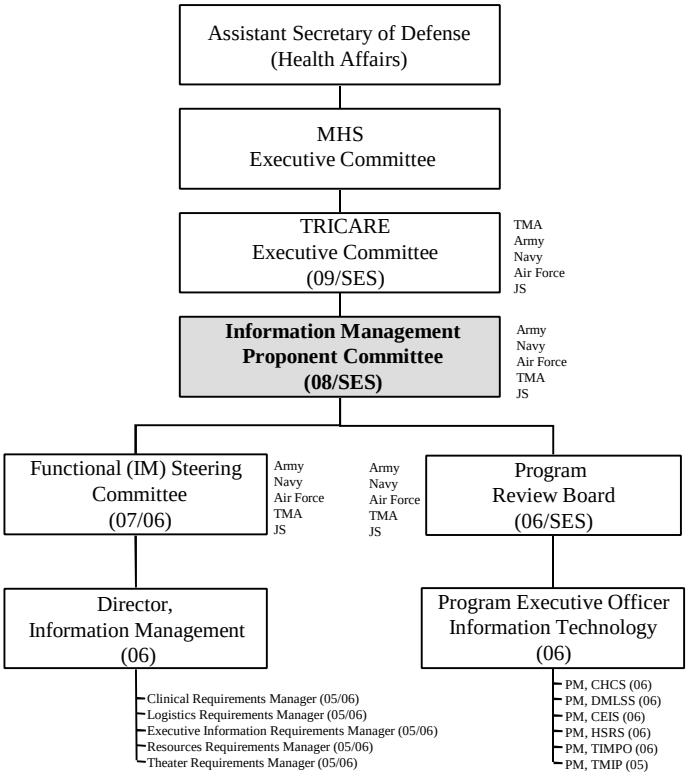
MHS Executive Committee roles and responsibilities are the following:

- MHS strategic planning;
- Development of broad policy regarding the function and operations of the MHS to ensure that it is capable of supporting the mission; and,
- Executive decision-making.



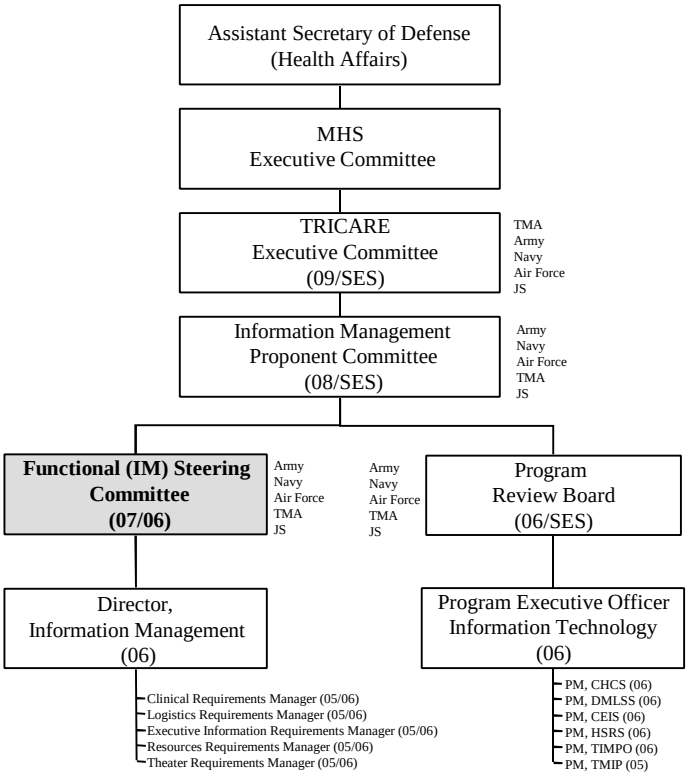
TRICARE Executive Committee roles and responsibilities are the following:

- TMA strategic planning;
- Development of broad policy regarding the functions and operations of the TMA to ensure that it is capable of supporting the mission; and,
- Executive decision-making.



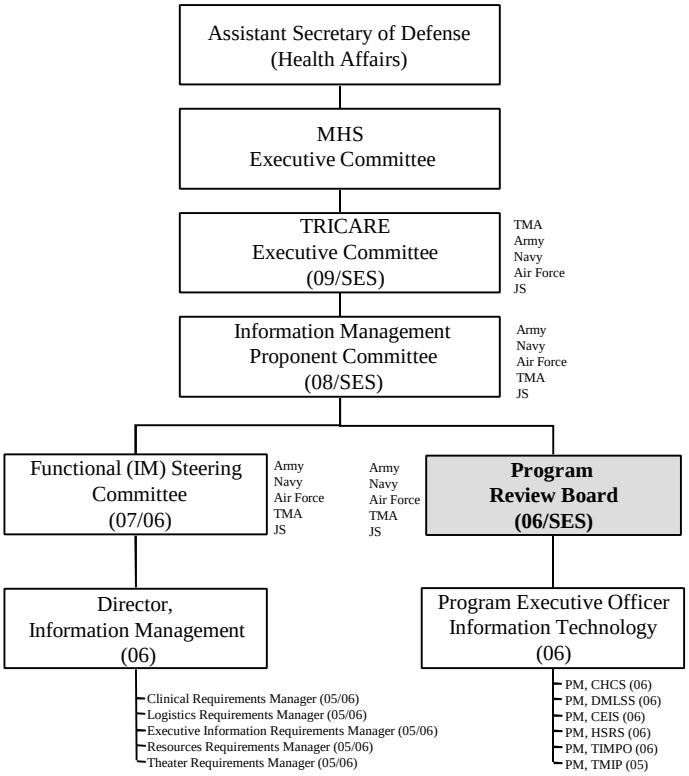
The IMPC has the following roles and responsibilities:

- Reviews and approves IM/IT investment strategy;
- Oversees the execution of the IM/IT program;
- Nominates the TMP and the Director of IM and recruits the necessary support personnel from other sources; and,
- Supports the MHS technical and functional integration efforts by coordinating with IMT&R.

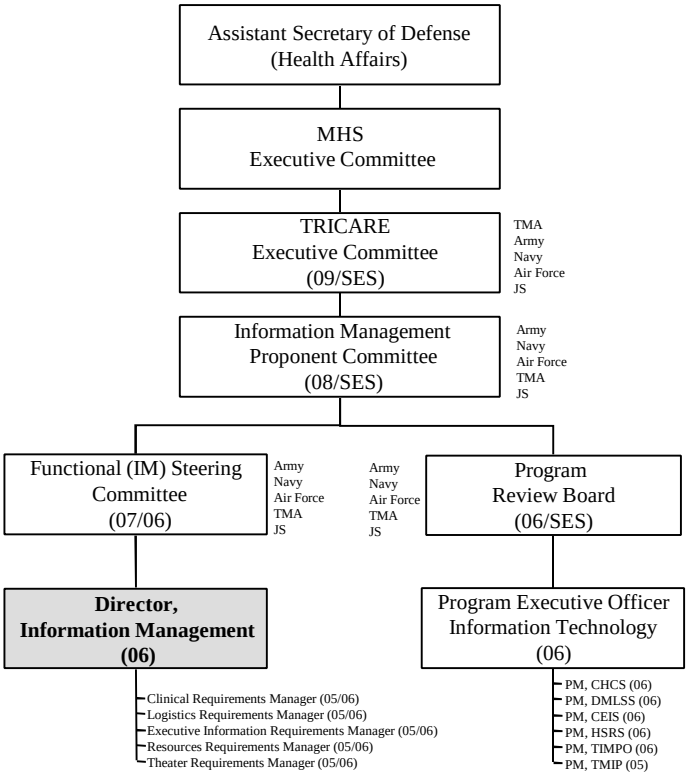


The roles and responsibilities of the Functional Steering Committee are the following:

- Reviews and validates integrated and prioritized IM functional requirements; and,
- Develops broad IM policy guidance for respective business areas.

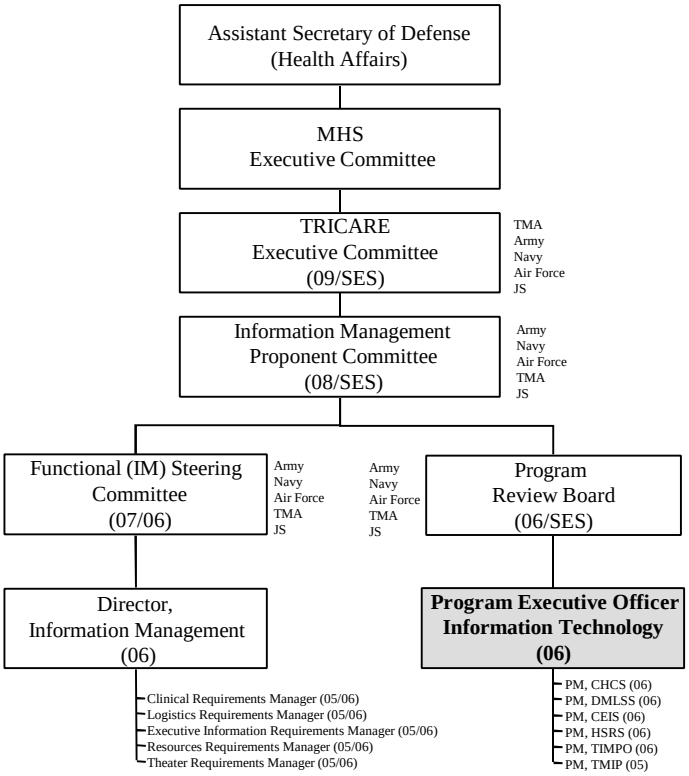


The Program Review Board reviews and validates programmatic, technical, data, and budgetary issues for the IT program.



The Director of Information Management has the following roles and responsibilities:

- Manages definition and validation of the IM functional requirements;
- Chairs functional work groups and committees;
- Serves as the functional area customer representative;
- Supports MHS reengineering initiatives; and,
- Manages development of the MHS business process model.



The Program Executive Officer for IT has the following roles and responsibilities:

- Manages program costs and schedules;
- Designs, develops and acquires, tests, deploys, and maintains Information Systems and IT;
- Plans, programs, and prepares target migration system POM/budget input;
- Provides programmatic status and risk management reports; and
- Develops migration strategy for all associated business area interim and legacy systems.

2. STEP 1—INFORMATION MANAGEMENT/INFORMATION TECHNOLOGY BUSINESS PROCESS REENGINEERING (BPR) INITIATIVE

2.1 Purpose

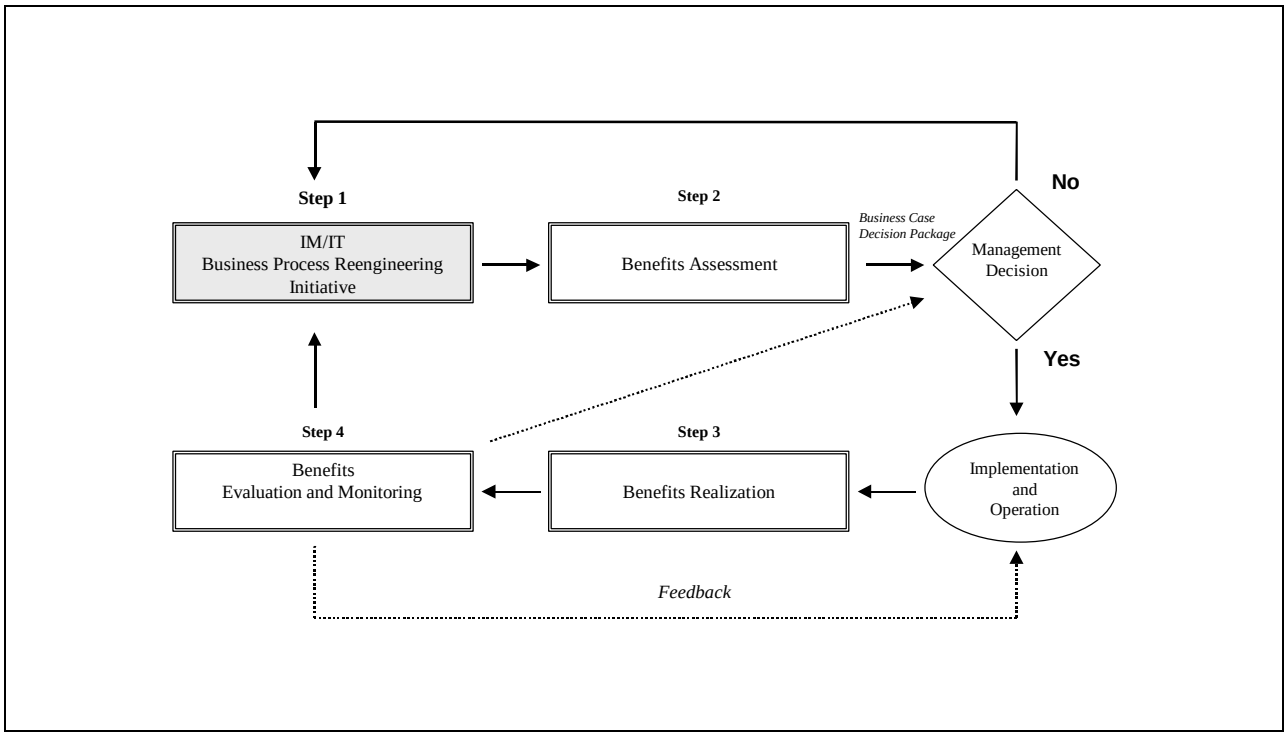


Figure 2.1
Step 1—IM/IT BPR Initiative

This section describes the activities required to define a results-based evaluation framework as part of step one of the MHS IM/IT Benefits Management Program. This work is done as part of the strategic planning activities performed as part of an IM/IT BPR initiative. The establishment of a results-based evaluation framework is valuable for an FM because it allows the following:

- Definition, measurement, and assessment of the functional area under the baseline, or status quo, condition;
- Development of linkages between operational activities and management activities; and,
- Transition to Step 2, the Benefits Assessment, by creating ways to identify, categorize, and measure potential improvements.

Toolkit 1
Section 2

2.2 Process

Figure 2.2.1 shows five steps to develop a results-based framework for a Functional Area or Functional Activity as part of an IM/IT BPR initiative.

2.2.1 Develop and Assess a Business Strategy (Step 1.1)

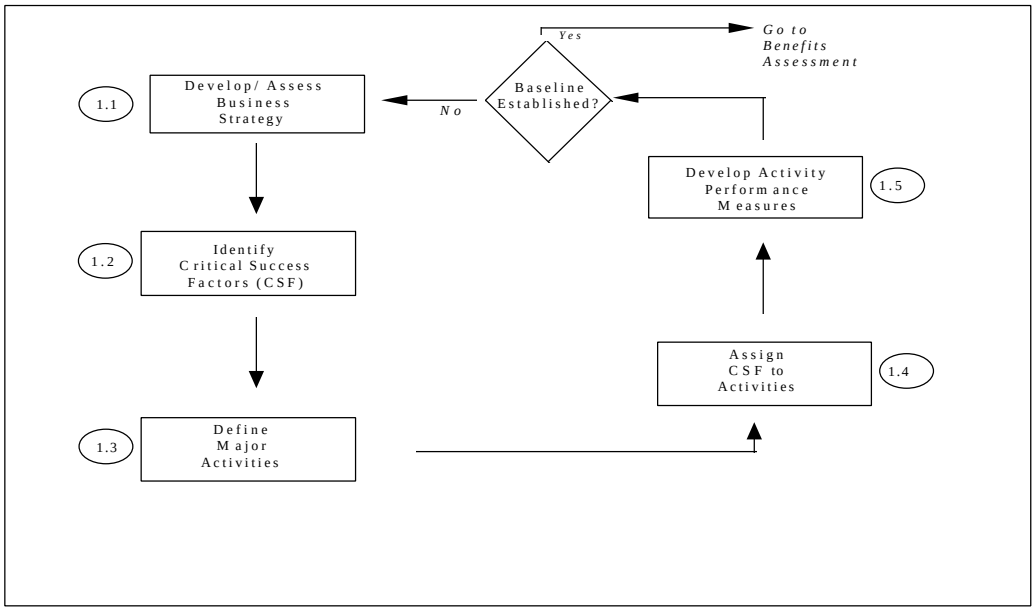


Figure 2.2.1
Step 1 Process—IM/IT BPR Initiative

As part of the IM/IT BPR initiative, the first step in developing a results-based framework (Step 1.1 in Figure 2.2.1) is to create a long-range, integrated, cross-functional strategy that defines the approach the functional area/functional activity will take to meet its vision and accomplish its overall objectives. Additionally, as part of this business strategy, the goals of the functional area/functional activity in relation to its customers, processes, and resources should be clearly enunciated within the business area.

2.2.2 Identify Critical Success Factors (CSFs) (Step 1.2)

The second step in developing a results-based framework (Step 1.2 in Figure 2.2.1) is to identify CSFs for the functional area. CSFs are organizational mission-critical objectives. These are the MHS goals and DoD goals when they are related and appropriate. The CSFs should express the objectives of the functional area in terms of the major performance measures of the MHS: cost, quality, access, and medical readiness. They should also identify dependencies with other functional areas and functional activities.

2.2.3 Define Major Activity Model (Step 1.3)

The third step in developing a results-based framework (Step 1.3 in Figure 2.2.1) is to define a major activity model for the functional area. This model defines the boundaries and scope of the functional area and is characterized by the identification of the inputs, outputs, controls, mechanisms, and systems of the functional area. The process also identifies internal and external customers and suppliers, product sets and their attributes, and process characteristics required to produce the customer-defined product attributes. Additionally, it identifies resource flows within and outside of the functional area.

2.2.4 Assign CSFs to Activities (Step 1.4)

The fourth step in developing a results-based framework (Step 1.4 in Figure 2.2.1) is to assign CSFs to the activities. This involves first identifying customer requirements. Then, identify critical product attributes and any deficiencies associated with the attributes. Finally, develop CSFs that address these deficiencies.

2.2.5 Develop Activity Performance Measures (Step 1.5)

The fifth step in developing a results-based framework (Step 1.5 in Figure 2.2.1) is to review the major activity model and identify specific performance measures within the major categories of cost, quality, access, and medical readiness. Then, evaluate the measures in the baseline state of the functional area.

Toolkit 1
Section 3

2.3 Suggested Criteria for Performance Measures

Functional management with performance measures tends to be most effective when the performance measures are easily measured and readily understood by decision-makers. Table 2.3 provides suggested criteria for creating effective performance measures.

Toolkit 1
Section 2

Table 2.3 Evaluation Criteria For Performance Measures

Is the right thing being measured?	*Does the measure do the following:* • *Capture improvement in performance of mission, goals, and objectives?* • *Capture the value-added contribution of the program or project?* • *Capture cost, quality, access, or medical readiness?*
Is this the right measure to use?	*Is the measure:* • *Targeted to a specific outcome?* • *Linked to the organization strategic plan?* • *Quantifiable, accurate, reliable, valid, and verifiable?* • *Credible and important to decision-makers?*
Is the measure being used in the right way?	*Is the measure useful in analysis and decision-making?*

Several methodologies exist that can provide a framework for performance measure development. The following are four widely used methods:

1. Hoshin Planning, which uses Process Performance Measures (PPMs) to translate organizational goals into measurable actions;

2. Quality Function Deployment (QFD), a process management tool that uses the team approach in developing and selecting business activity metrics;

3. The Balanced Scorecard, a performance management framework that recommends performance metrics be developed to address the four perspectives of the business (customer, internal, innovation, and strategic and financial); and,

4. Integrated Computer-Aided Manufacturing Definition (IDEF) business engineering process.

It is important to note that regardless of which process is used to develop performance measures and capture the performance data, the process best serves the organization by not becoming intrusive to the operations of the functional area.

3. STEP 2—BENEFITS ASSESSMENT

3.1 Purpose

A benefits assessment model identifies, measures, and documents *expected* improvements derived from the implementation of an IM/IT project in the MHS. The benefits assessment process quantifies the expected ROI of an IM/IT proposal as part of a business case decision package such as an AoA, an AIS Economic Analysis, or an IDP. The benefits assessment is based on the best available data that can be obtained at reasonable cost compared to the expected costs and benefits of the IM/IT proposal.

Toolkit 1
Section 3

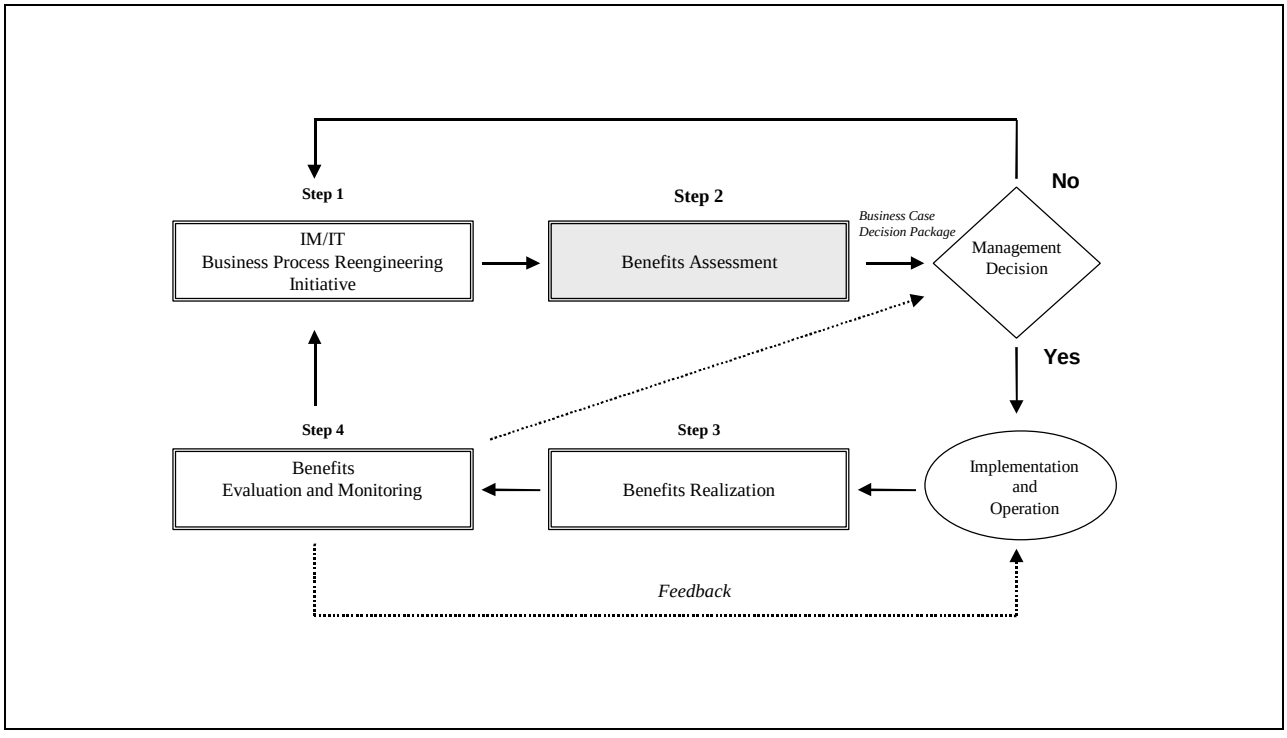


Figure 3.1
Step 2—Benefits Assessment

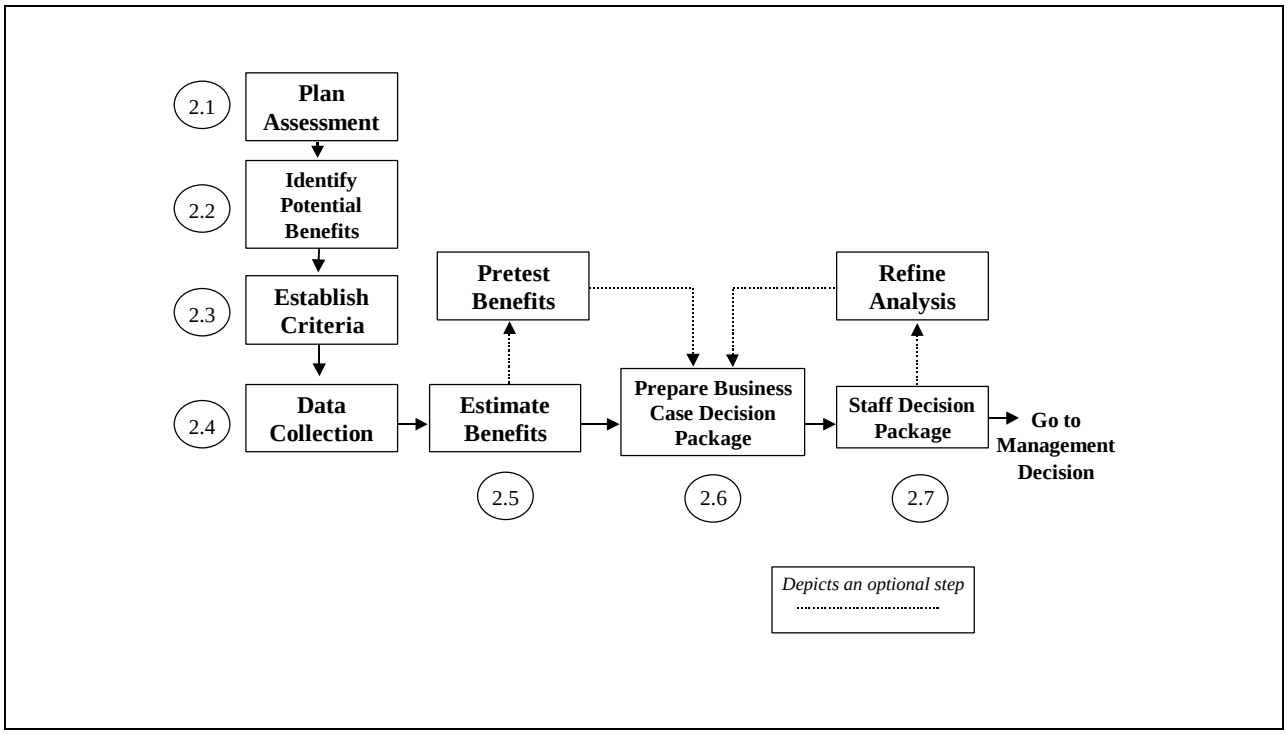


Figure 3.2
Step 2 Process—Benefits Assessment

3.2 Process

The steps of the benefits assessment process are detailed in Figure 3.2.

3.2.1 Plan Assessment (Step 2.1)

A consideration in conducting benefits assessment is the need to identify, document, and validate those quantitative benefits that will be most convincing to decision-makers. Within the initial design phase of the benefits assessment process, each sequential step within the process has essential elements of information that must be addressed.

Toolkit 2
Section 1

3.2.2 Identify Potential Benefits (Step 2.2)

The second step in the benefits assessment process (Step 2.2 in Figure 3.2) is to identify potential benefits of the initiative. First, gather readily available data related to the expected benefits, and then categorize the expected benefits as either cost, quality, access, or medical readiness benefits, being certain to identify any cost improvements as either financial savings or other cost benefits.

Finally, using rough orders of magnitude data, determine whether the expected benefits are greater than the expected costs of performing the benefits assessment. If the benefits are not greater than the costs of the assessment, then determine whether to continue with the proposed improvement opportunities.

Toolkit 1
Section 3

3.2.3 Establish Criteria to Select Benefits (Step 2.3)

The third step in the benefits assessment process (Step 2.3 in Figure 3.2) is to establish the criteria from which to select benefits. This entails ensuring that the potential benefits do the following:

- Meet the decision-makers' need for information;
- Provide an agreed basis for decision-making;
- Are measurable in terms of cost, quality, access, or medical readiness;
- Are understandable;
- Apply broadly;
- Are uniformly interpreted;
- Are compatible with existing data;
- Are precise in their interpretation; and,
- Are placed within the context of an overall business case.

Finally, structure the assessment around the benefits that optimize the established criteria.

3.2.4 Perform Data Collection (Step 2.4)

The fourth step in the benefits assessment process (Step 2.4 in Figure 3.2) is to perform data collection for the benefits that optimize the criteria from Step 2.3. Potential sources of data collection include the following:

- Centralized data bases;
- On-site observation;
- Focus groups;
- Surveys;
- One-on-one interviews;
- Literature review; and,
- Other accepted data collection methodologies.

If the data collection does not yield the required data to proceed to Step 2.5, restructure the benefits assessment using available data. Finally, assess and attempt to quantify the projected risks associated with each of the benefits.

3.2.5 Estimate the Benefits (Step 2.5)

The fifth step in the benefits assessment process (Step 2.5 in Figure 3.2) is to estimate the benefits of the initiative. This entails calculating financial savings and opportunity cost benefits.

Then, calculate the percentage improvement in quality, access, and medical readiness performance measures and construct confidence intervals for benefits estimates. Next, identify improvement opportunities that are not able to be quantified and justify the lack of quantification.

At this point in the process, there is the opportunity to pretest the expected benefits by using prototyping or other live data collection activities before committing substantial resources to the production of complete documentation. Advantages of pretesting benefits using small projects include the reduced financial risk from benefits that do not materialize, the decreased documentation process time, and the increased confidence in expected benefits forecasts by capturing live data from the pretest activity.

Toolkit 1
Section 3

3.2.6 Prepare Business Case Decision Package (Step 2.6)

The sixth step in the benefits assessment process (Step 2.6 in Figure 3.2) is to prepare the business case decision package.

3.2.7 Staff Results (Step 2.7)

The seventh step in the benefits assessment process (Step 2.7 in Figure 3.2) is to staff the business case decision package within the MHS decision-making process and to request a decision to be made based on the decision package. At this point in the process, staffing comments are incorporated and, if required, the analysis may be refined.

4. STEP 3—BENEFITS REALIZATION

4.1 Purpose

Upon completion of the benefits assessment and business case decision case package, a management decision is made based on the evaluation of the soundness of the business case. A negative decision returns the IM/IT proponent to the initial step of identifying potential Business Process Reengineering (BPR) alternatives. A positive management decision leads to the implementation and operations step of the life cycle. Business realization is defined as the process of monitoring the implementation of an initiative both to validate that the expected benefits are being obtained in practice and to identify any unexpected consequences of the implementation.

Toolkit 1
Section 4

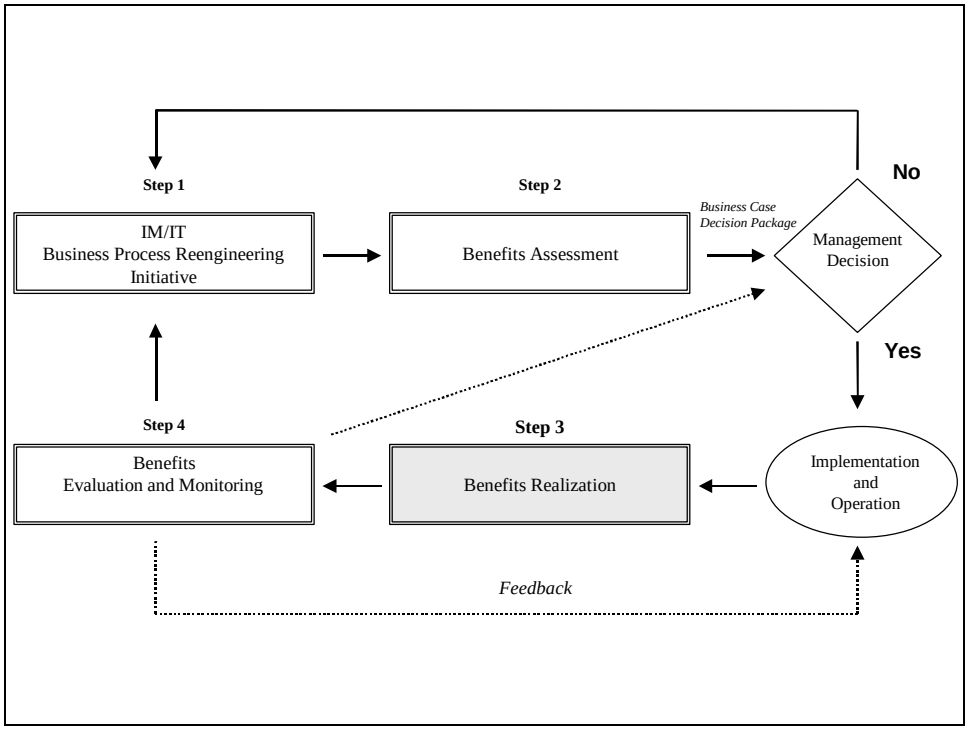


Figure 4.1
Step 3—Benefits Realization

4.2 Process

Benefits Realization is a formalized process for user feedback that provides guidance on identification of new benefits and the corresponding measurement and validation. The steps of a benefits realization process are shown in Figure 4.2.

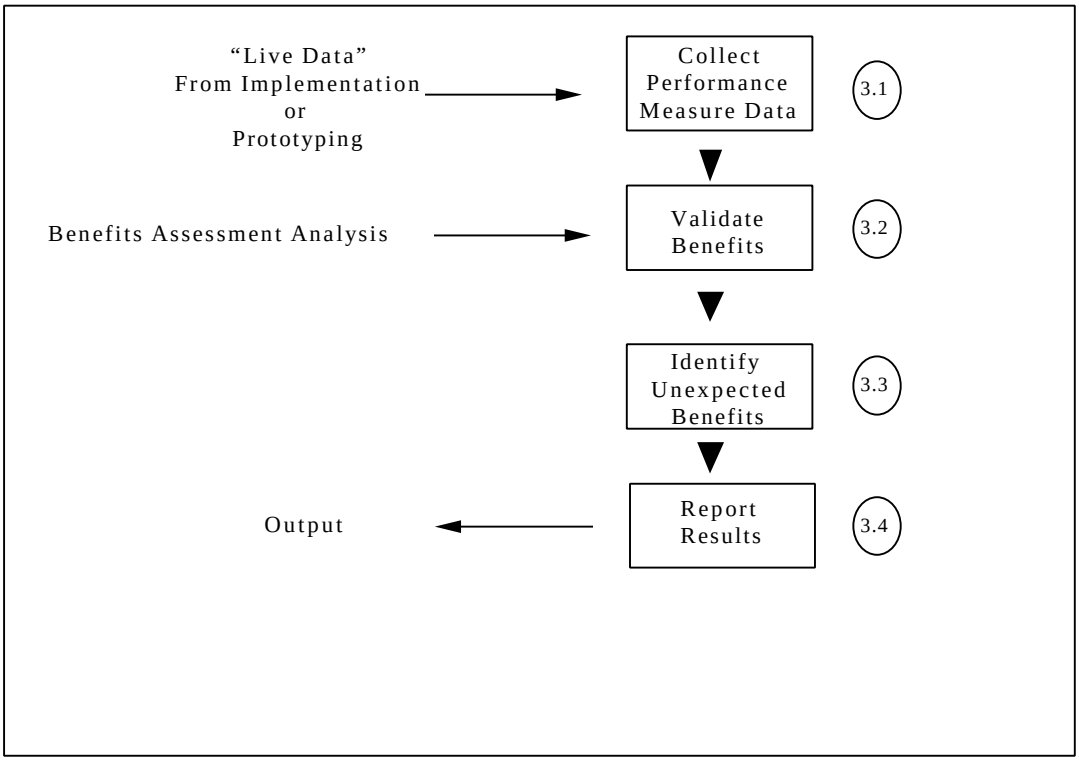


Figure 4.2
Step 3 Process—Benefits Realization

4.2.1 Collect Performance Measure Data during Implementation (Step 3.1)

The first step in the benefits realization process (Step 3.1 in Figure 4.2) is to collect performance measures during implementation of the initiative. This entails identifying sources of "live" performance measure data at implementation or prototype sites. Then, establish reliable mechanisms to collect data and collect the data.

4.2.2 Validate Benefits (Step 3.2)

The second step in the benefits realization process (Step 3.2 in Figure 4.2) is to validate the benefits collected. This involves calculating the percentage of change in performance measures from the baseline values established in Step 1.5 (see Figure 2.2.1). Then, determine the variance and statistical significance of the variance of these calculations with the estimated benefits in Step 2.5 (see Figure 3.2). Next, calculate the cost benefits of the initiative. And finally, document the results.

4.2.3 Identify Unexpected Benefits (Step 3.3)

The third step in the benefits realization process (Step 3.3 in Figure 4.2) is to identify any unexpected benefits associated with the initiative. First, analyze data from Step 3.1 for unanticipated results. Then, attempt to determine the significance of unanticipated results. Finally, document the new results and communicate unexpected benefits to other sites to maximize the value of the findings.

4.2.4 Report Results (Step 3.4)

The fourth and final step in the benefits realization process (Step 3.4 in Figure 4.2) is to report the results to the Functional Manager and Technical Program Manager of the Business Area.

5. STEP 4—BENEFITS EVALUATION AND MONITORING

5.1 Purpose

The benefits evaluation and monitoring step is the process of evaluating the benefits realization outcomes, making continued approval decisions, and developing remedial activities and policies to support the achievement of positive outcomes in practice. This step provides feedback both to the decision process, in the form of recommendations related to continued funding, and to the implementation process, in the form of what is working and what is not.

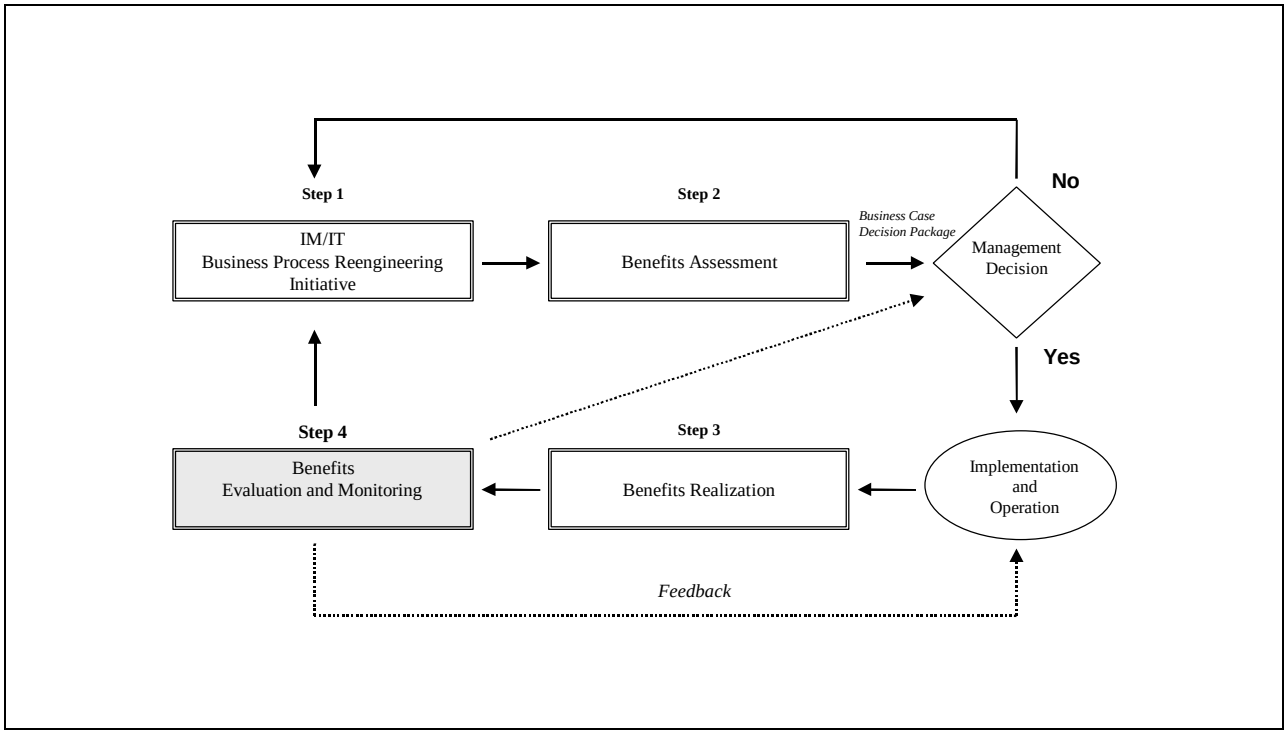


Figure 5.1
Step 4—Benefits Evaluation and Monitoring

5.2 Process

The benefits management process provides a complete feedback loop for the IM/IT participants throughout the MHS. Once implementation and operation of the approved IM/IT proposals have begun (i.e., upon completion of the benefits analysis), the benefits management process ensures that the proposal's expected benefits are being achieved by the organization and also looks for any unintended outcomes. If any negative outcomes are encountered, then the oversight committees coordinate with the Program Manager, Director of Information Management, FM, TPM, and functional communities to take corrective actions. Thus, the feedback mechanism ensures that the MHS strategic goals are being met with the implementation of the approved proposal.

Toolkit 1
Section 5

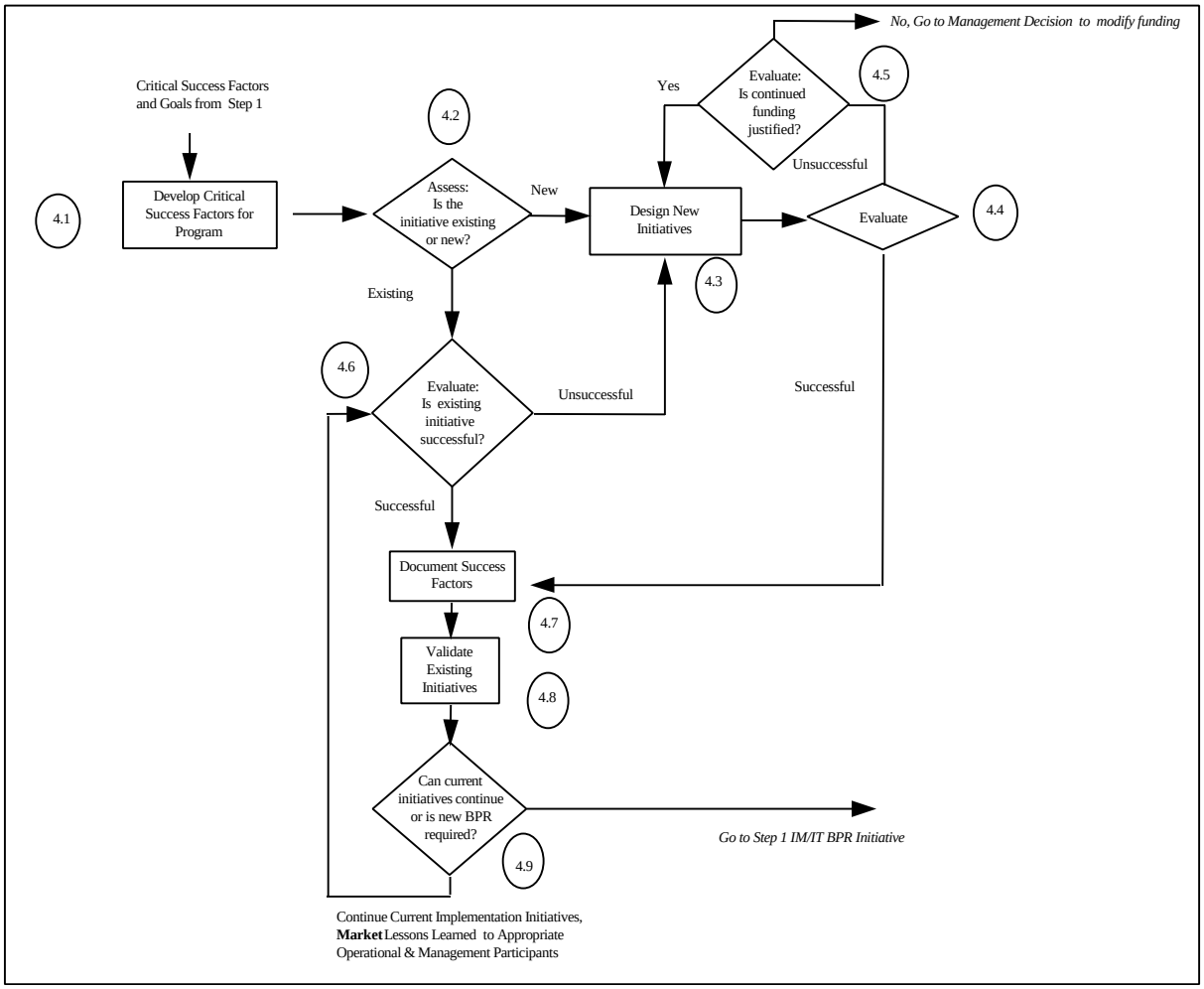


Figure 5.2
Step 4—Management Evaluation and Monitoring of Benefits

5.2.1 Develop Critical Success Factors for Proposal (Step 4.1)

The first step (Step 4.1 in Figure 5.2) in the management evaluation and monitoring of benefits is to develop CSFs for the particular proposal being evaluated. This includes identifying its goals, communication mechanisms with operational community, and any change management needs within the operational community.

5.2.2 Assess if Existing or New Initiative (Step 4.2)

The second step (Step 4.2 in Figure 5.2) in the management evaluation and monitoring of benefits is assessing whether the proposal is an existing or new initiative.

5.2.3 Design New Initiative (Step 4.3)

If the proposal is for a new initiative, then the third step (Step 4.3 in Figure 5.2) in the management evaluation and monitoring of benefits is to design the new initiative. First, identify the possible stakeholders for the new initiative. Then, identify CSFs for the initiative and create an implementation plan for the initiative. Finally, develop any necessary support material for the successful implementation of the initiative.

5.2.4 Evaluate Success of the New Initiative (Step 4.4)

The fourth step (Step 4.4 in Figure 5.2) in the management evaluation and monitoring of benefits is to evaluate the success of the new initiative. This entails validating outcomes of the initiative and then assessing whether the CSFs for the new initiative have been achieved.

5.2.5 Evaluate Justification for Further Funding (Step 4.5)

The fifth step (Step 4.5 in Figure 5.2) in the management evaluation and monitoring of benefits is to evaluate the justification for further funding of the new initiative. First, compare the cost of the initiative to its expected benefits. Then, compare the cost against those benefits actually realized. Finally, if continued funding is justified, then report results to the Functional Manager and Technical Program Manager of the Business Area to request their approval to modify funding.

5.2.6 Evaluate Success of Existing Initiative (Step 4.6)

The sixth step (Step 4.6 in Figure 5.2) in the management evaluation and monitoring of benefits is to evaluate the success of existing initiatives. This involves validating benefits outcomes and assessing the achievement of CSFs associated with the existing initiatives.

5.2.7 Document Success Factors (Step 4.7)

The seventh step (Step 4.7 in Figure 5.2) in the management evaluation and monitoring of benefits is to document the factors contributing to the success of the existing initiatives. This includes identifying lessons learned and then communicating the successful elements to the locations implementing the initiatives.

5.2.8 Validate Existing Initiatives (Step 4.8)

The eighth step (Step 4.8 in Figure 5.2) in the management evaluation and monitoring of benefits is to validate the existing initiatives. This involves first incorporating successful elements into the existing initiatives, as appropriate. Search for any economies in initiatives based on previous successful initiatives. Finally, communicate the validated initiatives to the current and future locations implementing the initiatives.

5.2.9 Decide Whether to Continue Current Implementation Initiatives (Step 4.9)

The ninth step (Step 4.9 in Figure 5.2) in the management evaluation and monitoring of benefits is to decide whether current implementation initiatives should continue, or if there is a need to return to Step 1 of the MHS IM/IT Benefits Management Program, IM/IT Business Process Reengineering Initiative, to revisit business area goals, objectives, and target values. If it is decided to continue with current implementation initiatives, then cost-effective methods of providing the lessons learned from the continuing implementation should be provided to the appropriate MHS operational and management participants.

6. SUMMARY

This guidebook has presented an executive-level overview of the MHS IM/IT Benefits Management Program by detailing the basic four implementation steps. Appropriate references to the *MHS IM/IT Benefits Management Program Supplement (Toolkit)* have been noted, and it has been stated that IMT&R will continue to update and maintain pertinent information and materials. Ongoing improvements to this Guidebook are expected as by-products of the IM/IT Integrated Product Teams, IMT&R Directors, and inputs from all program participants. Any revisions or new versions of this Guidebook will be published for all participants.